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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,336	10/14/2003	Robert D. Keefover	DKT 03016 (BWI-00087)	1254
68945 7590 08/21/2007 WARN, HOFFMANN, MILLER & OZGA, P.C. P.O. BOX 70098 ROCHESTER HILLS, MI 48307			EXAMINER AURORA, REENA	
			ART UNIT 2862	PAPER NUMBER
			MAIL DATE 08/21/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/685,336

Applicant(s)

KEEFOVER ET AL.

Examiner

Reena Aurora

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2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 3 - 14 and 16 - 42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 and 19 - 42 is/are allowed.
- 6) ☒ Claim(s) 1, 5 - 7, 9, 12 - 14 and 18 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 10, 11, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>03/12/07</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

This communication is in response to amendment received on 05/24/07.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5 – 7, 9, 12 – 14 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Fey et al. (6,552,531).

As to claim 1, Fey et al. (hereinafter Fey) discloses a method and circuit for processing signals for a sensor comprising a single sensor element (2), said single sensor element (2) providing a sensor signal that varies with the measured parameter; a first output circuit (FS1) responsive to the sensor signal and providing a first output signal; a second output circuit (FS2) responsive to the sensor signal and providing a second output signal, wherein the first (signal from FS1) and second (signal from FS2) output signals are two of multiple outputs from the sensor element (2); shared circuits coupled to the sensor element and the first and second output circuits, said shared circuits (4, 5) including circuit elements used by both the first (FS1) and second (FS2)

output circuits; and wherein system diagnostics are preformed without two or more sensors (col. 3, lines 1 - 11).

As to claim 9, Fey discloses a method and circuit for processing signals for a sensor comprising a single sensor element (2) for sensing the parameter, said single sensor element (2) providing a sensor signal; shared circuits (4, 5) coupled to the sensor element (2), said shared circuits (4, 5) providing sensing system operations; a first output circuit (FS1) responsive to the sensor signal from the shared circuits (4, 5), said first output circuit providing a first output signal (signal from FS1); and a second output circuit (FS2) responsive to the sensor signal from the shared circuits (4, 5), said second output circuit providing a second output signal (signal from FS2), wherein the first (FS1) and second (FS2) output signals are multiple outputs from the sensor element (2).

As to claim 14, Fey discloses a method and circuit for processing signals for a sensor comprising sensing the parameter with a single sensor element (2) and providing a sensor signal indicative of the parameter (col. 3, lines 1 - 11); applying the sensor signal to a first output circuit (FS1), said first output circuit providing a first output signal indicative of the sensed condition; applying the sensor signal to shared circuits (4, 5) before applying the sensor signal to the first (FS1) and second (FS2) output circuits; and applying the sensor signal to a second output circuit (FS2), said second output circuit providing a second output signal indicative of the sensed condition, wherein the first (signal from FS1) and second (signal from FS2) output signals are two of multiple outputs from the sensor element.

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As to claims 5 and 12, Fey discloses that the sensor element is selected from the group consisting of Hall-effect sensors, inductive sensors, magneto-resistive sensors, encoders and potentiometers (col. 1, lines 13 - 23).

As to claims 6 - 7, 13 and 18, Fey discloses that the sensing system monitors the condition of a parameter or component in a vehicle (col. 1, lines 30 - 35) and monitoring a throttle plate position in a throttle body (intended use).

#### ***Allowable Subject Matter***

Claims 3, 4, 10, 11, 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 8 and 19 - 42 are allowed.

#### ***Response to Arguments***

Applicant's arguments filed on 05/24/07 have been fully considered but they are not persuasive. Applicant's argument that Fey '531 does not disclose "said shared circuits including circuit elements used by both the first and second output circuits" as stated in independent claim 1 and a review of the drawing and specification of Fey '531 states that reference numeral 4 is a modulator and reference numeral 5 is a current source. See col. 2, lines 53-55. The current source is not a circuit. Fey clearly shows shared circuits 4, 5 used by both first and second output circuits FS1, FS2. The shared circuits can include any circuitry component such as current source or modulator.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, P. Assouad can be reached on 571-272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Reena Aurora

  
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